CLAIMS

I claim:

21. A method of analysis comprising the steps of:

(a) labeling molecules in a first sample each with a label;

(b) mixing the labeled molecules of said first sample with molecules of a second sample into a mixture of molecules;

(c) contacting said mixture of molecules with an array of binding agents; and

(d) detecting said label from said array.

22. The method of analysis of claim 21 further comprising a step of:

comparing the detecting data of said label from said array to a detecting data from another array.

23. The method of analysis of claim 21 further comprising a step of:

comparing a detected amount of said label at one spot within said array to a detected amount of said label at another spot within said array.

24. The method of analysis of claim 21 further comprising a step of:

comparing a relative amount of a type of molecule between said first sample and said second sample through an observation of said label.

25. The method of analysis of claim 21 wherein said label is a radioactive label.

26. The method of analysis of claim 21 wherein said first sample is labeled by tritium exchange.

27. The method of analysis of claim 21 wherein said first sample is labeled by neutron bombardment.

28. The method of analysis of claim 21 wherein said first label is a distinguishable characteristic of said molecules other than an incorporated chemical tag.

29. The method of analysis of claim 21 wherein said array further comprising an immobilized label as a means for standardizing a comparison between at least two arrays.

30. A method of labeling a sample for analysis using neutron bombardment whereby a resulting label is a radioactive isotope or a heavy isotope.

31. The method of claim 30 wherein a resulting label is a post-decayed element of a resulting radioactive isotope.

32. The method of labeling of claim 30 wherein said sample is a biological sample.

33. The method of labeling of claim 30 wherein said sample comprises at least one protein.

34. A method of analysis comprising the steps of:

(a) providing a first sample of labeled molecules;

(b) mixing said first sample of labeled molecules with a second sample of molecules to create at least two different mixtures each having a different ratio of said first sample to said second sample;

(c) applying said different mixtures to similar arrays of binding agents; and

(d) comparing signals between said similar arrays whereby a relative abundance of molecules between said first sample and said second sample is interpreted.

35. The method of claim 34 wherein said first sample and said second sample originated from comparable sources.

36. The method of claim 34 wherein a quantification of a type of molecule in said second sample is sought whereas said type of molecule is known to be present in said first sample.

37. The method of claim 36 wherein said array comprises a binding agent specific for said type of molecule.

38. An array comprising an immobilized label as a means for standardizing comparison made between at least two arrays.

39. Said array of claim 38 wherein said label includes a radioactive isotope.

40. A method of analysis comprising the steps of:

(a) labeling molecules in a first sample with a first radioactive isotope;

(b) labeling molecules in a second sample with a second radioactive isotope;

(c) combining said first sample and said second sample into a mixture;

(d) contacting said mixture with an array of binding agents; and

(e) detecting radiation from said array.

41. The method of analysis of claim 40 further comprising a step of selectively quantifying radiation originated from said first radioactive isotope versus said second radioactive isotope using these isotopes' difference in half-life.

42. The method of analysis of claim 40 further comprising a step of selectively quantifying radiation originated from said first radioactive isotope versus said second radioactive isotope using these isotopes' difference in radiation energy.

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43. The method of analysis of claim 40 further comprising a step of focusing said radiation from said array using a magnetic field.